

REMARKS

Claim 16 has been amended based on the disclosure in, e.g., the paragraph bridging pages 31-32 in the specification. Claim 34 has been added corresponding to claim 16 except for reciting "consisting of" language and including recitations based on the disclosure at, e.g., page 17, lines 33-37 in the specification. Claims 35-43 have been added corresponding to claims 17, 18, 21, 29, 30, 31, 22, 32 and 33, respectively

Entry of the above amendment is respectfully requested.

Interview with Examiner

Applicants thank the Examiner for the personal interview conducted with Applicants' representative on January 20, 2010. Applicants believe that the interview was helpful in advancing the prosecution of the present case. A Statement of Substance of Interview is submitted herewith.

Obviousness Rejection over Goto et al.

On page 2 of the Office Action, in paragraph 3, claims 16-18, 21-23 and 29-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goto et al. US 5,304,326.¹

In response, Applicants note that the claims have been amended to recite that the hydrothermally resistant electroconductive cured product has a volume resistivity of 2×10^{-2} Ωcm or less, which is magnitudes less than the volume resistivities in Tables 1-3 of Goto, the lowest of which is 90 Ωcm . Accordingly, Applicants submit that Goto neither teaches nor suggests the invention as recited in the amended claims.

¹ Since claim 23 was previously withdrawn, Applicants believe that the rejection concerns claims 16-18, 21-22 and 29-33.

Further, with respect to the invention of claim 34 and the claims dependent thereon, Applicants note that the curable composition contains as a resin component only the component (A) which is a hydrocarbon compound, and the mass ratio of the hydrocarbon compound having a plurality of carbon-carbon double bond as the component (A) and the electroconductive carbonaceous material as the component (B) is 0.01:1 to 1.5:1. Applicants submit that Goto neither teaches nor suggest such an invention.

In this regard, Applicants note that the purpose of the invention described in Goto et al. is to provide a shaped product which has resiliency (see, e.g., col. 3, lines 25-30). In line with this, in column 4, lines 43-54, it is described as follows:

The effects intended in the present invention can be obtained by compounding 1-50 wt.parts, or more preferably 2-30 wt.parts, or most preferably 3-20 wt.parts of the ultra-fine carbon fibrils used in the present invention against 100 wt.parts of the combined mixture of the aforementioned thermoplastic elastomer and the aforementioned non-thermoplastic elastomer. The reinforcing effects are not sufficient when the amount of ultrafine carbon fibrils is below 1 wt. part, while the amount should not exceed 50 wt. parts so that the superior processing characteristic of the elastomer specific to 1,2- polybutadiene may not be lost."

From this description, it can be understood that the content of the ultra-fine carbon fibrils is at most 50 wt.parts as compared to 100 wt. parts of resin component, i.e., at most 33 wt% of the total elastomer composition. In other words, the content of the ultra-fine carbon fibrils is relatively low. For example, as described in TABLE 2, Volumetric Resistivity (Ohm.cm) in

Application Example 6 is 90, which is the lowest value among a plurality of Application Examples. On the contrary, as shown in Table 3 (page 48) of the specification of this application, the numerical value of Volume Resistivity is from 4.3 to 9.4 mΩ.cm, which is about 10,000 times smaller than that described in Goto et al. That is, the shaped product described in Goto et al. does not possess electroconductivity required for a fuel cell separator.

As set forth above, claim 34 includes the limitation "wherein the mass ratio of the hydrocarbon compound having a plurality of carbon-carbon double bonds as the component (A) and the electroconductive carbonaceous material as the component (B) is 0.01:1 to 1.5:1." That is, in the present invention, the ratio of the content of the electroconductive carbonaceous material (B) to the total curable composition is higher than $\{1/(1.5+1)\} \times 100 = 40(\%)$. On the other hand, as stated above, the content of the ultra-fine carbon fibrils is at most 50 wt. parts as compared to 100 wt. parts of resin component, i.e., at most 33 wt% of the total elastomer composition (if the reference were to contain no resin other than a hydrocarbon compound having a plurality of carbon-carbon double bonds, in view of the "consisting of" language in claim 34). In this connection, there is a constitutional difference between the present invention and the invention described in Goto et al.

Thus Applicants submit that the present invention is not obvious over Goto et al., and withdrawal of this rejection is respectfully requested.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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